

15-16
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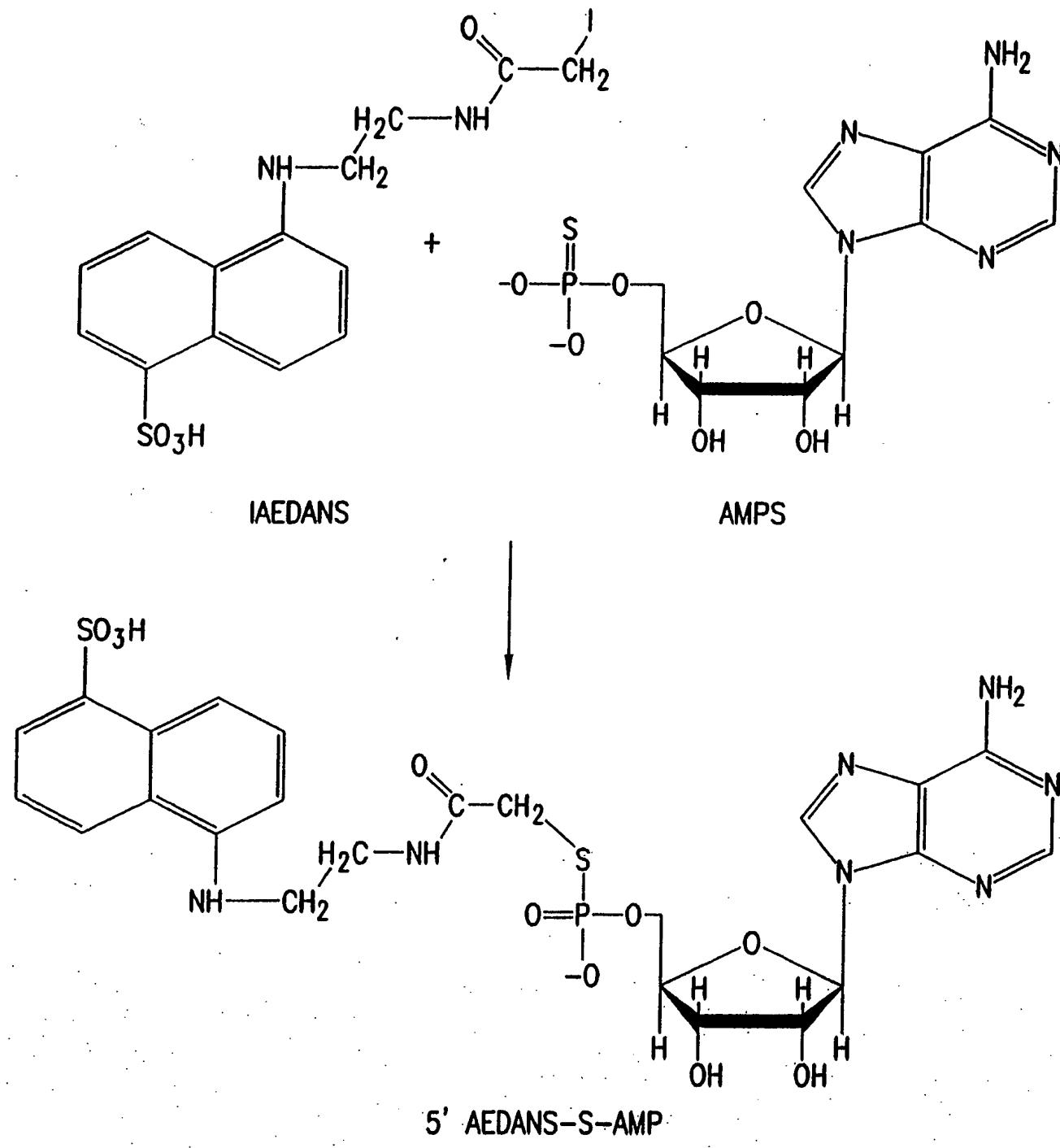


FIG.3

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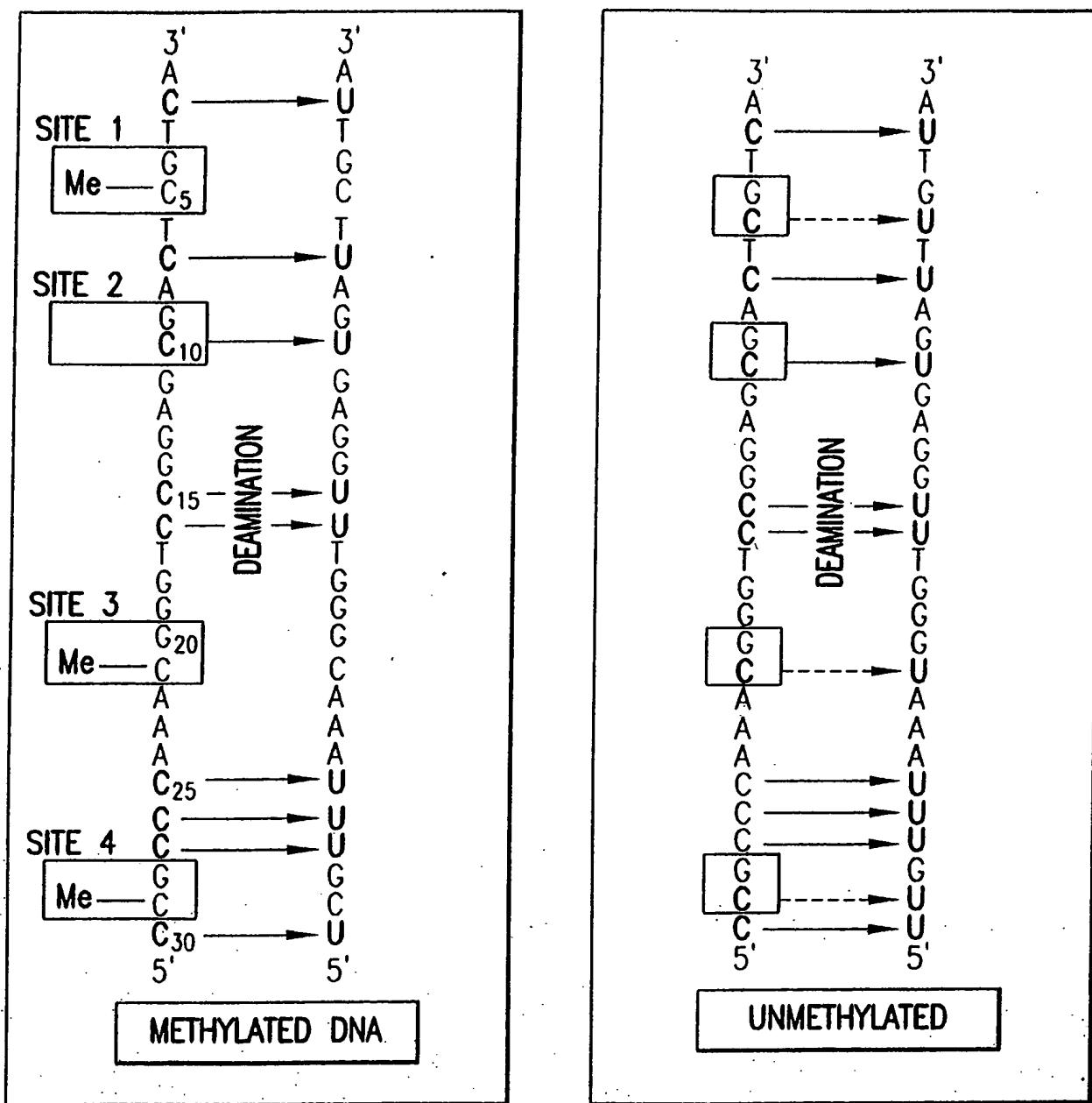


FIG. 13

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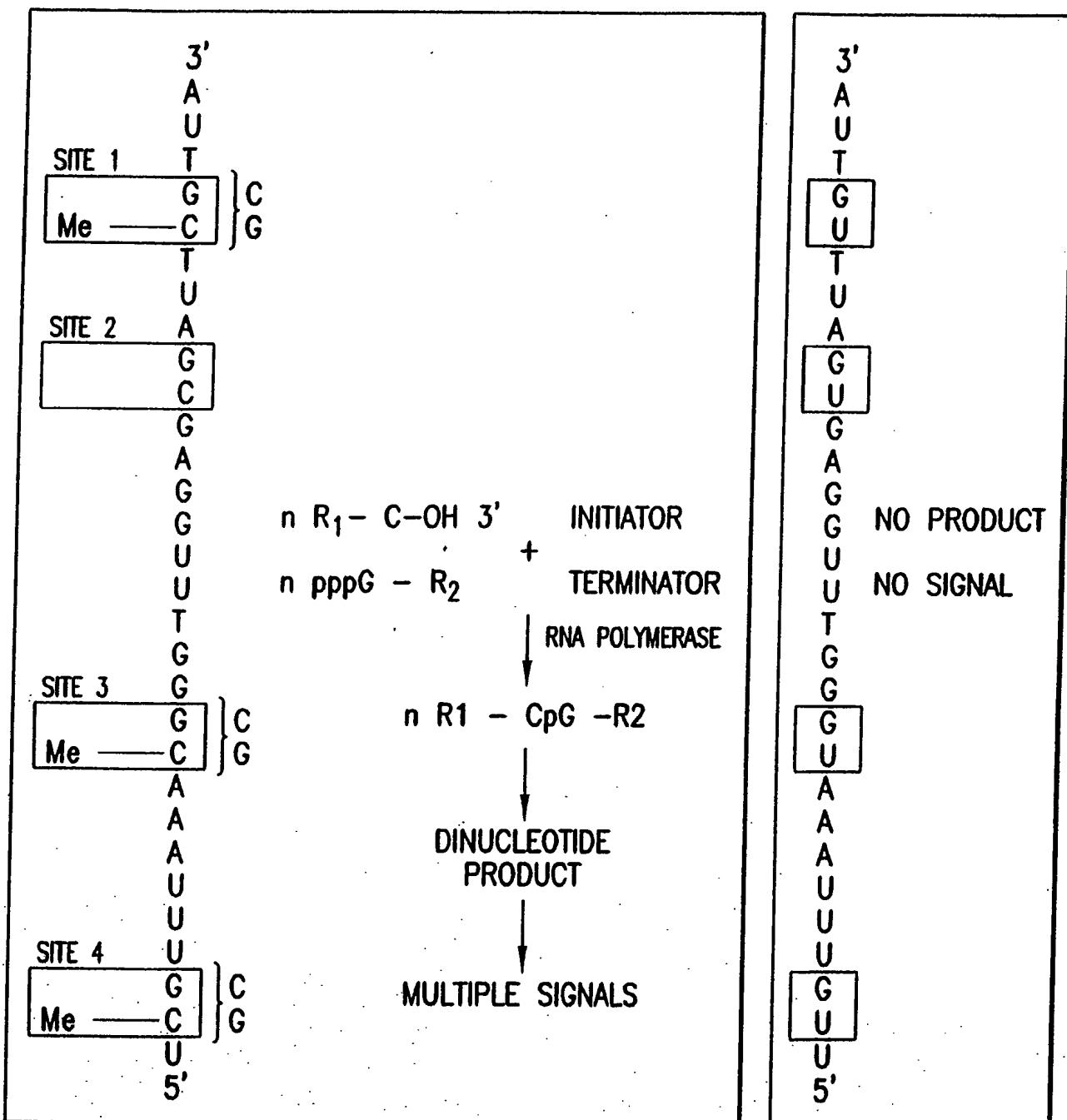
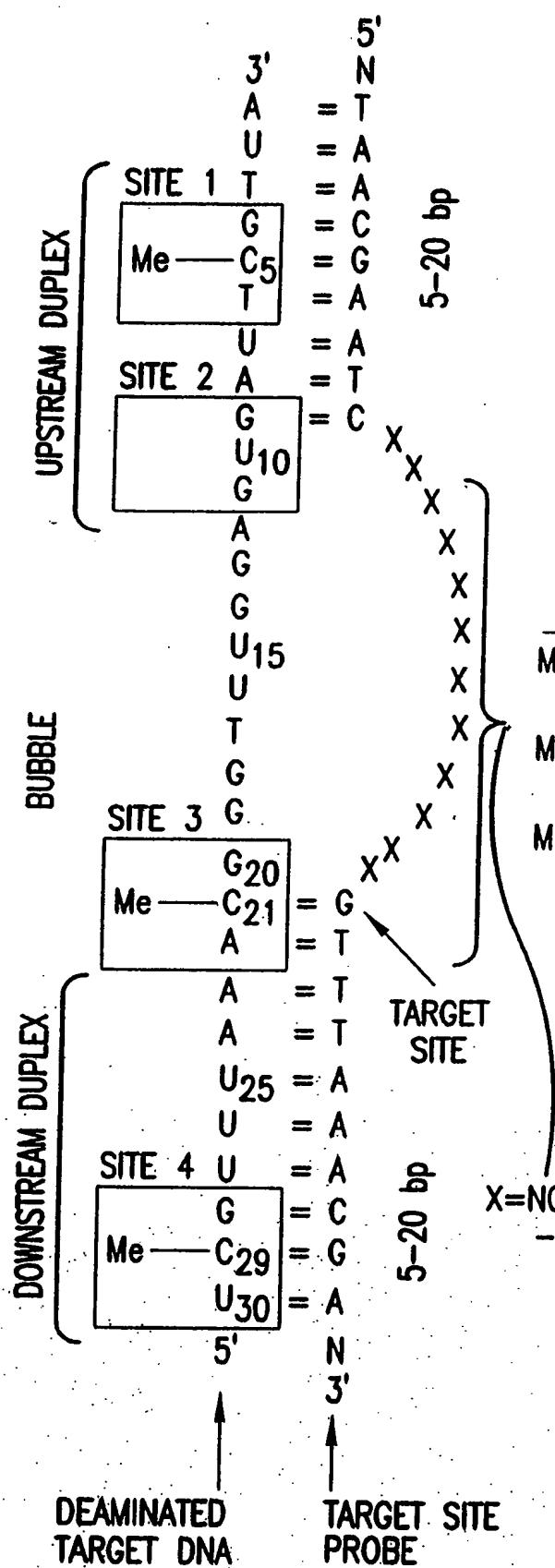
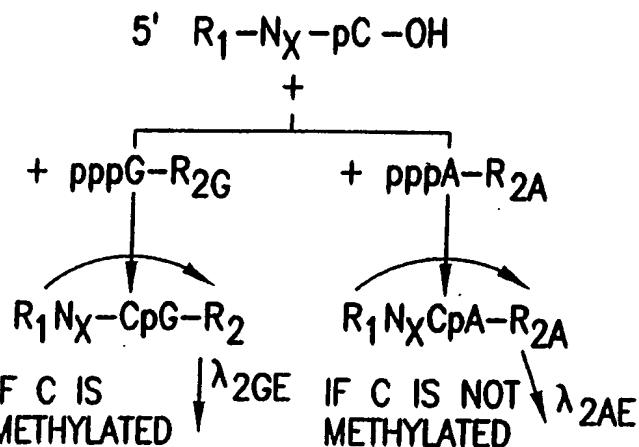


FIG. 14



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METHYLATED: ONLY λ_{2GE} DETECTED

M=0.5 IF 1 COPY IS METHYLATED: BOTH λ_{2GE}
AND λ_{2AE} DETECTED

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 λ_{2AF} DETECTED

$$M = \text{METHYLATION INDEX} = \frac{E\lambda_{2GE}}{E\lambda_{2GE} + E\lambda_{2GA}}$$

X=NON BASE-PAIRED NUCLEOTIDES
-BUBBLE IS 8-14 nt LONG

PROBLE

FIG. 15

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ATATACTGGGTCTACAAGGTTAAGTCACCAGGGATTGAAATATAACTTTAAACAGAGCTGGATTATCCAGT
AGGCAGATTAAGCATGTGCTTAAGGCATCAGCAAAGTCTGAGCAATCCATTTTAAACGTAGTACATGTTT
TGATAAGCTTAAAAGTAGTAGTCACAGGAAAATTAGAACTTTACCTCCTGCGCTTGTATACTCTTAGT
GCTGTTAACTTTCTTGTAAGTGAGGGTGGTGGAGGGTGCCATAATCTTTCAAGGGAGTAAGTTCTCTT
GGTCTT
TGGCGCGATCTCGGCTCACTGCAACCTCCGCCTCTCCTGGGTTCAAGCGATTCTCCTACATCAGCCTCCGA
GTAGCTGGATTACAGGCATGCCACCAAGCCCCGTAATTGTATTAGTAGAGACAGGGTTTGC
CATGTTGGTCAGGCTTGTCTCGAACCTCCGCCTCAGGTGATCCGCCTGTCCTGGCCTCCCAGAATGCTGG
GATTATAGACGTGAGCCACCGCATCCGACTTTCTTATGTAATAGTGATAATTCTATCCAAAGCATT
TTTTTTTGAGTCGGAGTCTCATTCTGTCACCCAGGCTGGAGGGTGGTGGCGCATCTGGCTTACTGCAA
CCTCTGCCTCCGGGTTCAAGCGATTCTCCTGCCTCAGCCTCTGAGTAGCTGGAATTACACACGTGCGCCA
CCATGGCCAGCTAATTGTATTAGTAGAGACGGGGTGTCAACCTTGGCCAAGCTGGCCTCGAAC
CTGACCTCAGGTGATCTGCCGCCTCGGCTCCAAAGTGCTGGATTACAGGTGAGGCCACCGCGTCCT
GCTCCAAAGCATTCTTCTTCTATGCCTCAAACAAAGATTGCAAGCCAGTCTCAAAGCGGATAATTCAAGAGC
TAACAGGTATTAGCTTAGGATGTGTCGACTGTTCTTAAGGCTTATATGATTAAACATCATTAAACTCACA
ACAACCCCTATAAAGCAGGGGGCACTCATATTCCCTCCCCCTTATAATTACGAAAATGCAAGGTATT
AGTAGGAAAGAGAAATGTGAGAAGTGTGAAGGAGACAGGACAGTATTGAAGCTGGCTTGGATCACTGTG
CAAACCTGCTTCTAGAACACTGAGCACTTTCTGCTCTAGGAATTATGACTTTGAGAATGGAGTCCGTCTT
CCAATGACTCCCTCCCCATTTCCTATCTGCCTACAGGCAGAATTCTCCCCGTCGTATTAAATAACCTCA
TCTTCTCAGAGTCTGCTCTTACCAAGGCAATGTACACGTCTGAGAAACCTTGGCCCAGACAGCCGTTTAC
ACGCAGGAGGGAGGGAGGGAGGGAGAGAGAGCAGTCCGACTCTCCAAAAGGAATCTTGAACTAGGG
TTTCTGACTTAGTGAACCCCGCGCTCTGAAATCAAGGTTGAGGGGGTAGGGGGACACTTCTAGTCGTA
CAGGTGATTGATTCTGGTGGGCTCTCACAACTAGGAAAGAATAGTTGCTTTCTTATGATTAAAGA
AGAAGCCATACTTCCCTATGACACCAAACACCCGATTCAATTGGCAGTTAGGAAGGTTGTATCGCGGAG
GAAGGAAACGGGGCGGGGGCGGATTCTTAAACAGAGTGAACGCACTCAAACACGCCCTTGTGGCAGG
CGGGGGAGCGCGGCTGGAGAGAGAGCAGGGAGGGAGGGAGGGAGGGAGGGAGGGAGGCCAGT
CCTCCTTCTTGCCAAACGCTGGCTCTGGCGAGGGCTGCTCCGGCTGGTGCCTCCGGAGACCCAAACC
TGGGGCGACTTCAGGGGTGCCACATTGCTAAGTGCTCGGAGTTAATAGCACCTCCTCCGAGCACTCGCTC
ACGGCGTCCCTTGCTGGAAAGATAACCGCGGTCCCTCCAGAGGATTGAGGGACAGGGTGGAGGGGGC
TCTCCGCGCAGCACCGGAGGAAGAAAGAGGAGGGCTGGCTGGTACCCAGAGGGTGGGGCGGACCGCGT
GCGCTGGCGGCTGGAGAGAGGGAGAGCAGGGAGGGCGGGAGGGAGGGAGGGAGGGAGGGAGGGAG
GGGGAGCAGCATGGAGCCTTCGGCTGACTGGCTGGCCACGGCCGCGGGGGGGTGGGTAGAGGAGGT
GCGGGCGCTGCTGGAGGGCGGGCGCTGCCAACGCAACGAATAGTTACGGTGGAGGGCGATCCAGGT
GGGTAGAGGGTCTGCAAGCGGGAGCAGGGGATGGCGGGCGACTCTGGAGGGACGAAGTTGCAAGGGAAATT
GGAATCAGGTAGCGCTTCGATTCTCGGAAAAAGGGGAGGCTTCTGGGAGTTTCAAAGGGTTTGTA
ATCACAGACCTCCTCTGGCGACGCCCTGGGGCTTGGGAAGCCAAGGAAGAGGAATGAGGAGCACGCG
CGTACAGATCTCTCGAATGCTGAGAAGATCTGAAGGGGGAAACATATTGTATTAGATGGAAGTATGCTTT
ATCAGATAAAAATTACGAACGTTGGGATAAAAAGGGAGTCTAAAGAAATGTAAGATGTGCTGGACTAC
TTAGCCTCCAATTACAGATACTGGATGGCTTATCTTCTTACTAGGAGGGATTATCAGTGAAATCTGT

FIG. 29A

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GGTGTATGTTGGAATAAATATCGAATATAAATTGATCGAAATTATTAGAAGCGGCCGGCGCGGTGCCTC
ACGCCTTGTAACTCCCTCACTTGGGAGATCAAGGCGGGGGAAATCACCTGAGGTGGAGTTCGAGACCA
GCCTGGCCAACAGGTGAAACCTCGCCTCTACTAAAAATACAAAAAGTAGCCGGGGTGGTGGCAGGCGCCT
GTAATCCCAGCTACTCGGGAGGTTGAGGCAGGAGAACGCTGAACCCGGGAGGCTGAGGTTGTAGTGAAC
AGCGAGATGGAGCCACTTCACTCCAGCCTGGGTGACAGAGTGAGACTTGTGAAAGAAAAGAGAGAA
AGAGAGAGAGAAAAATTATTAGAAGCAACTACATATTGTGTTATTTTAACTGAGTAGGGCAAATAAATATA
TGTTTGCTGTAGGAACCTAGGAAATAATGAGCCACATTGATGTGATCATTCCAGAGGTAATATGTAGTTACCAT
TTTGGGAATATCTGCTAACATTGGCTTTACTATCTTAGCTTACTGATATAGTTATTTGTGATAAGAG
TTTCAATTCCCTCATTTTGACACAGAGGTGTTCTCCTCTCCCTACTCCTGTTGTGAGGGAGTTAGGGAG
GATTTAAAAGTAATTAATACATGGGTAACTTAGCATCTCTAAATTTGCCAACAGCTGAACCCGGGAGTTG
GCTTTGTAGTCCTACAATATCTAGAAGAGACCTTATTTGTTAAAACAAAAGGAAAAGAAAAGTGGATAG
TTTGACAATTAAATGGAG

FIG. 29B

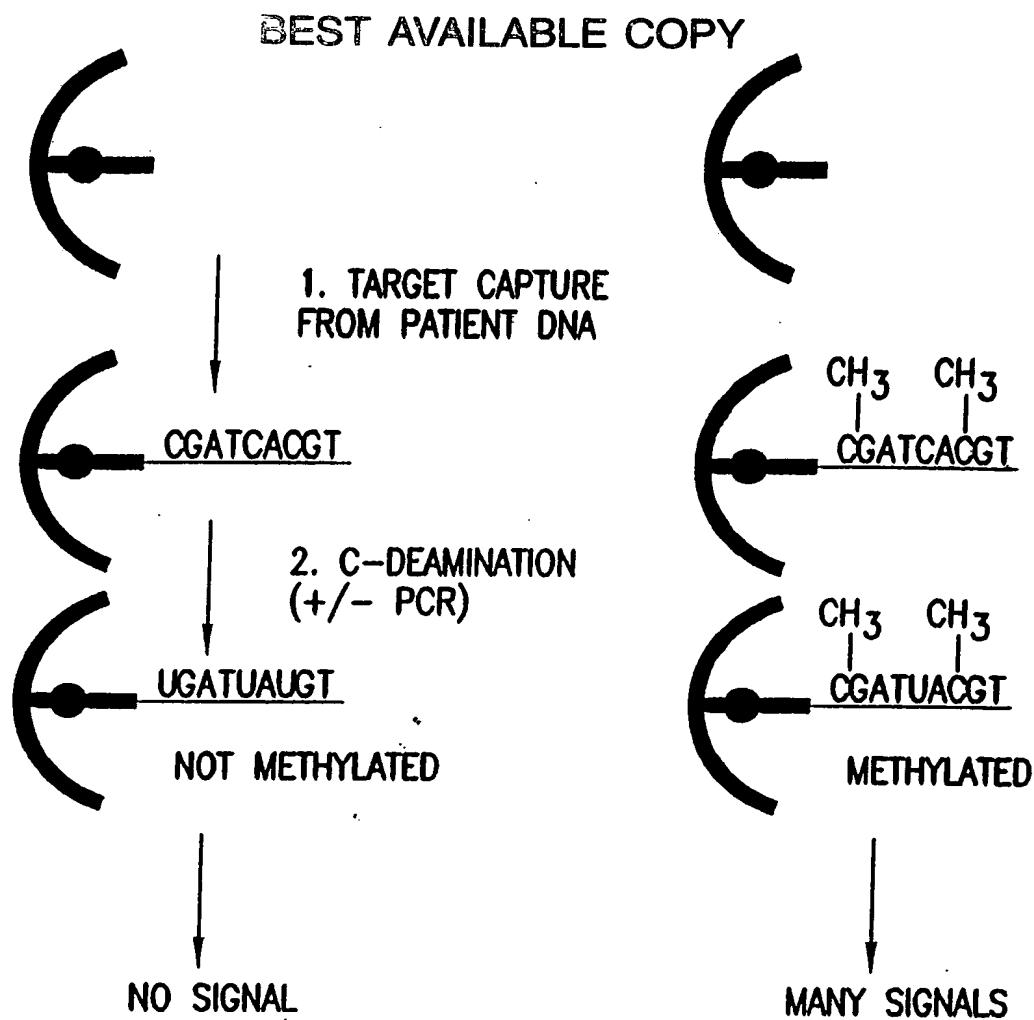


FIG. 30